

# Osteoadherin (H-160): sc-98456

## BACKGROUND

Osteoadherin (OSAD) is a bone proteoglycan containing keratan sulfate that belongs to the small leucine-rich proteoglycan (SLRP) family. Osteoadherin promotes Integrin  $\alpha\beta 3$ -mediated cell binding. The central region of Osteoadherin consists of 11 B-type, leucine-rich repeats ranging in length from 20 to 30 residues. The full, primary sequence of Osteoadherin contains four putative sites for tyrosine sulfation, three of which are at the N-terminal end of the molecule, six assumed sites for N-linked glycosylation, and a large and very acidic C-terminal domain, which is unique to Osteoadherin. Expression of Osteoadherin is limited to extra-cellular space and the extracellular matrix, as it is a secreted protein.

## REFERENCES

- Sommarin, Y., Wendel, M., Shen, Z., Hellman, U. and Heinegård, D. 1998. Osteoadherin, a cell-binding keratan sulfate proteoglycan in bone, belongs to the family of leucine-rich repeat proteins of the extracellular matrix. *J. Biol. Chem.* 273: 16723-16729.
- Wendel, M., Sommarin, Y. and Heinegård, D. 1998. Bone matrix proteins: isolation and characterization of a novel cell-binding keratan sulfate proteoglycan (osteoadherin) from bovine bone. *J. Cell Biol.* 141: 839-847.
- Buchaille, R., Couble, M.L., Magloire, H. and Bleicher, F. 2000. Expression of the small leucine-rich proteoglycan osteoadherin/osteo-modulin in human dental pulp and developing rat teeth. *Bone* 27: 265-270.
- Matsushima, N., Ohyanagi, T., Tanaka, T. and Kretsinger, R.H. 2000. Super-motifs and evolution of tandem leucine-rich repeats within the small proteoglycans-biglycan, decorin, lumican, fibromodulin, PRELP, keratan, osteoadherin, epiphygan, and osteoglycin. *Proteins* 38: 210-225.
- Shen, Z., Gantcheva, S., Sommarin, Y. and Heinegård, D. 2000. Tissue distribution of a novel cell binding protein, osteoadherin, in the rat. *Matrix Biol.* 18: 533-542.
- Lucchini, M., Romeas, A., Couble, M.L., Bleicher, F., Magloire, H. and Farges, J.C. 2002. TGF $\beta$ 1 signaling and stimulation of osteoadherin in human odontoblasts *in vitro*. *Connect. Tissue Res.* 43: 345-353.
- Ramstad, V.E., Franzen, A., Heinegård, D., Wendel, M. and Reinhold, F.P. 2003. Ultrastructural distribution of osteoadherin in rat bone shows a pattern similar to that of bone sialoprotein. *Calcif. Tissue Int.* 72: 57-64.
- Lucchini, M., Couble, M.L., Romeas, A., Staquet, M.J., Bleicher, F., Magloire, H. and Farges, J.C. 2004.  $\alpha\beta 3$  Integrin expression in human odontoblasts and co-localization with osteoadherin. *J. Dent. Res.* 83: 552-556.
- Solberg, L.B., Melhus, G., Brorson, S.H., Wendel, M. and Reinhold, F.P. 2006. Heat from Lowicryl sections of bone. *Micron* 37: 347-354.

## CHROMOSOMAL LOCATION

Genetic locus: OMD (human) mapping to 9q22.31; Omd (mouse) mapping to 13 A5.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## SOURCE

Osteoadherin (H-160) is a rabbit polyclonal antibody raised against amino acids 221-380 mapping within an internal region of Osteoadherin of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Osteoadherin (H-160) is recommended for detection of Osteoadherin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Osteoadherin (H-160) is also recommended for detection of Osteoadherin in additional species, including bovine and porcine.

Suitable for use as control antibody for Osteoadherin siRNA (h): sc-61265, Osteoadherin siRNA (m): sc-61266, Osteoadherin shRNA Plasmid (h): sc-61265-SH, Osteoadherin shRNA Plasmid (m): sc-61266-SH, Osteoadherin shRNA (h) Lentiviral Particles: sc-61265-V and Osteoadherin shRNA (m) Lentiviral Particles: sc-61266-V.

Molecular Weight of Osteoadherin: 60 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **Osteoadherin (B-10): sc-271102**, our highly recommended monoclonal alternative to Osteoadherin (H-160).